

App. No. 10/777,667
Amdt. Dated April 11, 2005
Reply to Office Action of February 10, 2005
Atty. Dkt. No. 8590-101

AMENDMENTS TO THE CLAIMS:

This listing of Claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of processing vegetables having bulbs including root crowns comprising:

securing a top portion of each of the vegetables;

applying an abrupt jarring ~~opposing forces~~ force to a bottom portion of each of the vegetables acting substantially in the direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to separate the roots or portions thereof at or near each root crown from the remaining portion of each vegetable; and

packaging the vegetables in a container.

2. (Currently Amended) A method according to claim 1, wherein said applying ~~opposing forces~~ force includes applying force to the bottom portion of each one of the vegetables below the intersection of the root crown and the bulb in the opposite direction ~~opposition to force applied~~ to the top portion of the vegetable to separate the bottom portion from the vegetable at the root crown.

3. (Original) A method according to claim 1, further including discarding the separated portions of the vegetables.

4. (Original) A method according to claim 1, wherein said applying force to the bottom portion includes moving the bottom portion of the vegetables into engagement with at least one pair of rotating members.

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5. (Original) A method according to claim 4, further including discarding the separated portions of the vegetables.
6. (Original) A method according to claim 1, further including singulating a group of the vegetables prior to the applying of force.
7. (Original) A method according to claim 6, further including washing the singulated vegetables.
8. (Original) A method according to claim 7, further including peeling the foreskins from the singulated vegetables.
9. (Original) A method according to claim 8, further including supporting the singulated vegetable vertically by its stalk.
10. (Original) A method according to claim 9, further including translating the vegetables along a path of travel.
11. (Original) A method according to claim 1, further including translating the vegetables substantially vertically along a path of travel into engagement with a de-rooter to apply force to the bottom portion of the vegetable.
12. (Original) A method according to claim 11, further including translating the vegetables to a second de-rooter to repeat the applying of force to the bottom portion of the vegetables.
13. (Currently Amended) A method according to claim 11, wherein the applying of an opposing force is caused by holding the upper top portion of the vegetable while the de-rooter applies force to the bottom portion of the vegetable.
14. (Original) A method according to claim 13, further including washing the vegetables after separating the bottom portion therefrom.

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15. (Original) A method according to claim 14, further including grouping the vegetables.
16. (Original) A method according to claim 11, wherein the de-rooter includes a pair of members rotating in opposite directions.
17. (Original) A method according to claim 16, wherein the rotating members include a pair of pinch rollers.
18. (Original) A method according to claim 16, wherein the rotating members include a pair of meshing gears.
19. (Original) A method according to claim 11, wherein the de-rooter includes a moveable clamp.
20. (Withdrawn) A system for processing vegetables having bulbs including root crowns comprising:
 - a clamp for applying force at the top portion of the vegetable; and
 - a de-rooter for applying force to the bottom portion of each one of the vegetables below the intersection of the root crown and the bulb in opposition to force applied by the clamp to separate the bottom portion from the vegetable at or near the root crown.
21. (Withdrawn) A system according to claim 20, wherein the de-rooter is a pair of rotating members.
22. (Withdrawn) A system according to claim 21, wherein the rotating members are pinch rollers.
23. (Withdrawn) A system according to claim 21, wherein the rotating members are meshing gears.
24. (Withdrawn) A de-rooter according to claim 20, wherein the de-rooter is a moveable clamp.

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25. (Currently Amended) A method according to claim 1, further including subsequently repeating the applying the abrupt jarring ~~opposing forces~~ force acting substantially in the direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to help ensure the separation of the roots or portions thereof at or near each root crown from the remaining portion of each vegetable.

26. (Currently Amended) A method according to claim 1, wherein the applying the abrupt jarring ~~opposing forces~~ force includes holding the vegetables individually by the upper top portions thereof, moving them seriatim to a de-rooting station, and applying an the abrupt jarring force to the bottom portion of each vegetable in the direction opposite ~~opposition to the holding force~~ applied to the upper top portion of each vegetable.

27. (Currently Amended) A method of processing vegetables having bulbs including root crowns comprising:

securing a top portion of each of the vegetables; and

applying an abrupt jarring ~~opposing forces~~ force to a bottom portion of each of the vegetables acting substantially in a direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to separate the roots or portions thereof at or near each root crown from the remaining portion of each vegetable.